

What is claimed is:

1. A reactor assembly comprising a substantially elongate tubular housing, at least one reactant inlet, at least one reaction mixture outlet disposed above the at least one reactant inlet, and agitator disposed in a region near the at least one reactant inlet and a perforated member disposed in tubular housing between the agitator and the reaction mixture outlet.
2. The reactor assembly defined in claim 1, wherein the perforated member is a disc.
3. The reactor assembly defined in claim 1, wherein the perforated member comprises apertures.
4. The reactor assembly defined in claim 1, wherein the perforated member comprises slots.
5. The reactor assembly defined in claim 1, wherein the perforated member occupies substantially the entire cross section of the tubular housing substantially transverse to its longitudinal axis.
6. The reactor assembly defined in claim 1, wherein the reactor assembly comprises a plurality of reactant inlets.
7. The reactor assembly defined in claim 1, comprising a plurality of perforated members.
8. The reactor assembly defined in claim 2, wherein the perforated member occupies substantially the entire cross section of the tubular housing substantially transverse to its longitudinal axis.

9. The reactor assembly defined in claim 9, wherein the perforated member comprises apertures.

10. A modular reaction system comprising a plurality of reactor assemblies as  
5 defined in any preceding claim, wherein the reactor assemblies are connected in series.